

Urban Forest Policy and Planning

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5.1 Introduction

The main objective of this chapter is to provide an overview of the status of urban forest policies in Europe. In the context of this chapter ‘urban forest policies’ encompass the full range of policies aimed at management and conflict regulation of relevance for urban forests as including all woodland and tree resources in and near urban areas (see Chap. 1).

In English language texts from the field of policy science three distinct terms are used in order to describe different objects of interest, which in everyday language are commonly referred to as being in the domain of ‘politics’ (e.g., Glück et al. 2001a). *Polity* refers to the institutional dimension at formal (e.g. constitution, laws, taxes, parliament) as well as informal (e.g., tradition) levels. *Politics* refers to the procedural dimension, looking at the dynamics of political processes (e.g., will formation, interest mediation, bargaining, and communication processes). *Policy* finally refers to the substantial or normative dimension, which includes issues and objectives as well as outcomes of the political process. In the context of this standard terminology this chapter is therefore focusing on ‘policy’, while also taking into account the ‘polity’ aspects of the field. Some other issues related to ‘politics’ are only marginally touched here and are being taken into account in other chapters, namely Chap. 7 and 8.

The chapter first introduces a theoretical conceptualization of urban forest policy and planning based on the policy scientific conceptualization of economical and political powers at play in today’s urban areas. It then focuses on the specific aspects of policies in the context of urban forestry, as opposed to national forest policies. This stems from the hypothesis that urban forestry policy networks and arenas are determined by different interests than ‘traditional’ forest policy networks and arenas. As urban forestry is a multidisciplinary domain in which forestry is one among different actors, this is understandable. In addition, the chapter will try to determine to what degree ‘national forest policies’ of certain countries in Europe are approaching or already coinciding with ‘urban forest policies’.

Next, some main ‘tension lines’ or underlying factors that shape urban forest policy to a large extent are outlined. This will assist with identifying some of the main characteristics, challenges and opportunities in urban forest policy-making. After this, empirical results from 14 towns and cities are then presented to introduce the situation of urban forest policy in different parts of Europe. The examples will also serve as illustration of the more theoretical perspectives presented in this chapter.

The final sections of this chapter discuss some of the major issues of relevance for urban forest policy and planning today. Moreover, they search for a theory of urban forest policy. The theory is based on general theory of policy-making but selects most relevant hypothesis covering the important factors driving the urban policy process.

As a result, the political dynamics of the problems urban forestry is facing today could be understood and used to design a more comprehensive, task-oriented approach.

5.2

Urban Forest Policy and Urban Planning

5.2.1

Theoretical Conceptualization of Urban Forestry and Urban Forest Policy

Looking down from a landing airplane onto an urban area makes it immediately clear what urban forest policy embodies. One sees urban trees and green islands floating within an ocean of housing and traffic lines. The urban socio-economic framework determines the options for green areas. Consequently the definition of urban forestry and the associated theories most usable for explaining the development of urban forestry and forest policy have to be grounded in theories about urban areas.

Trees and forests are important elements of urban green structures. As described in Chap. 4, they contribute to the high ecological and aesthetical significance of green elements for the quality of life in densely inhabited areas. The impact of trees and forests comprises benefits in the field of atmosphere, hydrology, noise reduction, wildlife and biodiversity (e.g., Nowak and Dwyer 2000). Furthermore trees provide aesthetic surroundings and significant emotional and spiritual experiences that are important in people's lives and can foster a strong attachment to urban areas. But there exist also great pressures on urban space resources (Nilsson and Randrup 1997). New buildings and traffic lines are devouring green areas. Harsh air and soil conditions are threatening the health of plants. Users not respecting ecological limits cause heavy damages to trees and soil. The competitiveness of potential users of green areas for different recreational types as well as competition with other users cause additional conflicts and stress. Due to the high population density maintenance of trees and forests in urban areas has to cope with specific problems. From this experience the concept of urban forestry was developed.

Managing a complex subject like urban forests is by no means a simple task. Inventorying and monitoring, techniques of treatment, planning, implementation, funding and responsibilities are very demanding. Facing these problems and looking for solutions created the concept of urban forestry as well as various innovative solutions to the different challenges (for example, Grey and Deneke 1992; Konijnendijk 1999, 2000; Kuser 2000). Treatment seems to be as difficult as the inventory. Techniques must be oriented toward specific products and needs. Handling conflicts in recreation does not only require appropriate ecological and recreation facilities but also psychological skills in convincing and guiding people. Planning is aimed at coordinating management in order to meet the objectives the community would like to see met. These objectives are as diverse as the interests in urban communities. Thus it is not surprising that urban forestry programs insist on strong organization and a stable budget. The key funding for this public has to come from the municipality. In addition, other public and private funds are necessary. The responsible organization and the funding have to be reliable to maintain sustainable urban forestry for the benefit of the entire community.

Based on this Programme urban forest policy can be defined as follows:

Urban forest policy is the social bargaining process for the regulation of conflicts related to interests in the utilization and protection of forests and trees according to urban forestry programmes.

Urban forestry programs focus on trees and forests within urban areas. Therefore the use and conflicts within urban areas are the most relevant for urban forest policy. Conflicts are caused by different users within urban areas and driven by their interests and power. The high density of uses and conflicts and the strong dynamics of social bargaining within urban areas are very challenging for regulating efforts. Nevertheless, urban forest policy does not follow the strong interests only, but sways the conflicts in favor of urban forestry's goals formulated in programs. Forest policy needs both a clear orientation toward public goals and the means and strategies to influence users. Whether and how a small program like urban forestry can have any impact on the overwhelming forces of urban areas is the domain of the theory of urban forest policy.

5.2.2

Key Distinctions between 'Urban Forest Policy' and 'National Forest Policies'

Issues and Objectives

Studies on forest-resource related conflicts at national and international levels (e.g., Humphreys 1999; Hellström 2001) have shown that political issues taken up by the political administrative system have mainly been conflicts between timber production and ecological interests (management practices and zoning of reserves), and timber production and other economic interests (for example the *Waldsterben*-debate of the 1980s, the loss of forest resources to other land uses). Social issues, including cultural and religious ones, have entered the debate only marginally, usually alongside ecological issues, for example in the case of rights of indigenous populations in debates over the use of forest resources in their environment.

Urban forest politics, however, have shown a slightly different development. As can be seen from the case studies presented elsewhere in this chapter, as well as from other recent work in this field (e.g., Forrest et al. 1999; Konijnendijk 1999), urban forest and green-space management has been less focused on raw material production and more on amenity values. This can even be claimed for those cases where urban forests originated from hunting reserves for the nobility, as these were mainly established and managed for representation and entertainment purposes rather than for the production of venison.

Table 5.1 (adapted from Glück et al. 2001a) provides an exemplary overview of the common forest policy fields. These can be defined based on the three groups of interests (social, economic, and ecological) and the most common conflicts arising from them. The main fields of urban forest politics are highlighted in bold print in the table, based on, for example the case studies introduced in the following parts of this text, and the case studies compiled by Konijnendijk (1997, 1999). The purpose of this table is to illustrate the difference between the type of conflicts typical for 'forest policy' in general, and the specific nature of 'urban forest policy', thus illustrating the legitimacy of dealing with the latter as a separate field of analysis, also from a forestry perspective.

Table 5.1. Overview of general forest policy fields, with highlighted in bold print the main issues of urban forest policy fields

Interests conflicting with	Interests		
	Social	Ecological	Economical
Economical	<ul style="list-style-type: none">▪ Forest recreation▪ Forest aesthetics▪ Soil and water protection	<ul style="list-style-type: none">▪ Nature conservation conflicts▪ Emissions into forest land (emission reduction policies)▪ CO₂-fixation	<ul style="list-style-type: none">▪ Multiple use forestry/joint production problems▪ Employment markets▪ Timber markets▪ Protection and increase of forest cover▪ Forest fires
	Spatial planning of forests and forest land uses (at regional levels)		
Ecological	<ul style="list-style-type: none">▪ Ecological problems of recreation▪ Carrying capacity	<ul style="list-style-type: none">▪ E.g., Biodiversity vs. closeness to nature▪ Cultural vs. natural landscapes	
Social	<ul style="list-style-type: none">▪ Recreation conflicts▪ Land ownership/public access to greenspace		

Actors

The distribution of roles between different actors in ‘general’ and ‘urban’ forest politics corresponds to that of issues and objectives as described above. Until the 1970s and in some countries even longer, national forest politics have been dominated by a trinity of state forest service, private owners and wood processing industries, and the institutions set up for and by these actors. During recent decades new actors have entered this arena. These represent the interests mostly in conflict with ‘traditional’ forestry, which had primarily been oriented towards the sustainable production of timber. Accordingly, the role of environmental institutions and especially that of environmental NGOs has become increasingly important. This is not only true at the national level, but especially also at the international level, where large international NGOs are nowadays recognised as being an important factor in the political process.

While state-owned forest enterprises have often been managed by public administrative institutions, such as a national or regional forest services the management models of public forestland are being changed. In most countries these are or already have been subject to restructuring and reorganization. In accordance with the general tide of public opinion and policies the role as managers of public land is being questioned and in many instances handed over to institutions, which are separate from authority administration. In some case, these can even be private entities, at least as regards their legal form (e.g., AssiDomain/Sweden, Bundesforste AG/Austria, Staatsbosbeheer/Netherlands).

This general trend towards a 'privatization' of public forestlands at the national and regional levels has not taken place at the municipal level to the same extent. Sometimes municipal administrative institutions have taken over the management or even the property of former national forest land in order to integrate it into their green-space planning.

In the urban context special 'green-space organizations' (i.e. park and garden services, municipal forest services) appear most prominently in their role as managers of public areas, and to a lesser degree also by exercising public authority over private lands (supervision of public regulations, and so forth). The management of parks and forests (i.e. woodland) is mostly divided among separate administrative units. Following the general patterns of institutional interests, these separate institutions are also competing for an increase of their respective fields of competence as well as additional resource allocation. Apart from organizations especially instituted for 'green-space administration' other institutions within the public municipal administration are also of relevance. The most prominent example for this are public road and public works administrations.

In most countries, this trend toward an increasing importance of the private sector has not (yet) been followed to the same extent in urban forestry. Municipal forest services and other green-space institutions have been quite successful in extending their activities and fields of influence over time (see e.g., Chap. 2). Having been relatively free from the obligations of economic profit they have had a much easier task than their national counterparts when it came to defending the costs of managing public lands. From the start most municipalities that acquired forest, land and other green space had done so explicitly for social objectives such as recreation and improvement of the urban environment. Due to this difference in objectives municipalities have also been less allied to the traditional actors of forest politics. As timber management and profit orientation was of minor importance they had it easier to achieve compromises with conservation interests, for example in abandoning controversial management practices such as the use of chemicals or clear-cutting. Similarly, municipalities are also more likely to be interested in voluntary activities such as certification of forest management and forest products. Usually, municipalities have opted for the FSC (Forest Stewardship Council) label (e.g., Konijnendijk 1999). FSC is an initiative by environmental NGOs (mainly WWF) and some forest industry actors (e.g., AssiDomain). This has also happened in countries where other public and private owners have been reluctant to accept the FSC-initiative and preferred the PEFC-system (Pan European Forest Certification System – an initiative by forest owners' institutions).

The role of private landowners in urban forest and green-space politics has been relatively minor, as primarily public land has been used for the implementation of urban forest and green-space policies (e.g., Krott and Nilsson 1998; Konijnendijk 1999). Municipalities have employed a 'property strategy' of transferring green space within their boundaries or within their otherwise described spheres of interest to municipal property. Policies used in this context include the conscious provision of 'land-buying funds' and the decreeing of first-buyer's rights for municipal authorities for land-transactions. Another policy has been the shrewd use of opportunity when in times of economic hardship some larger scale land-owners were willing to part with properties which could be used to cover for financial obligations in other areas, or which had primarily served representative functions no longer affordable by the owner.

Due to these developments in the context of urban forest and green-space politics, private land property nowadays plays a role mainly in the form of private non-productive lands. These include private gardens and to a lesser extent private or semi-private parks, as in the case of sports and recreation club properties. Apart from the restriction of land use, change and some general tree protection laws or regulations on hazardous materials, the owners of such areas (often owning a very significant share of all green space) are relatively free with regards to their management objectives. Type and nature of vegetation (species selection), design aspects, degree of naturalness, and even minor landscaping changes are left to the owner's discretion to a large extent. Conflicts in this field are more likely regulated by civil-law regulations on neighbors' rights and obligations than by public policies.

Non-governmental institutions, on the other hand, play a major role in urban forest politics. The main difference with general forest politics is that local organizations are more important in an urban context (e.g., Konijnendijk 1999). Some NGOs have devel-

Table 5.2. Comparison of role and relevance of most important actors in national/regional and urban forest politics

Actor group	Forest politics at national and regional levels	Urban forest politics
National forest authority (forest service)	<ul style="list-style-type: none"> ▪ Implementation of national forest policies (regulative, financial, informational instruments) ▪ Management of public forest land (in most countries decreasing) ▪ Extension and other services for private land-owners 	<ul style="list-style-type: none"> ▪ Mainly supervision role (unless forestry issues have been devoluted/decentralised to the local level)
Municipal forest service and other public green-space organisations	<ul style="list-style-type: none"> ▪ Mainly defence of municipal interests vs. national authorities ▪ No need for alliances with traditional public or private owners 	<ul style="list-style-type: none"> ▪ Implementation of municipal forest and greenspace policies ▪ Management of public lands
Private land owners	<ul style="list-style-type: none"> ▪ Property rights ▪ Financial and other benefits from land management 	<ul style="list-style-type: none"> ▪ In most countries not very relevant, with the exception of some forms of 'common' property (e.g., Buergergemeinden in Switzerland); private gardens do constitute an important component of the urban forest, however, e.g. in terms of ecological greenstructure
Wood processing industries	<ul style="list-style-type: none"> ▪ Raw material supply 	<ul style="list-style-type: none"> ▪ Mostly not relevant
NGOs	<ul style="list-style-type: none"> ▪ Environmentally sound management practices ▪ Conservation areas ▪ Conflict with land-owners 	<ul style="list-style-type: none"> ▪ Environmentally sound management practices ▪ Conservation areas ▪ Less conflicting role ▪ Importance of local groups and single-issue initiatives!

oped out of the large number of single-issue, ad-hoc initiatives, which are also characteristic for urban forest politics. In some cases, for instance in The Netherlands, Denmark, and the United Kingdom, cooperation with local interest groups constitutes a new, special form of public administration. From a theoretical approach this constitutes an implementation of the idea of ‘community forest management’ – which primarily has developing world roots (Raintree 1991) – to the conditions of urban Europe. In community forestry approaches, responsibility for planning as well as management of public areas is shared with local interest groups. In some instances these are actually charged with specific management tasks (Forrest et al. 1999; Konijnendijk 1999 for examples).

Given the low relevance of timber production objectives in urban areas timber processing industries are practically not relevant as actors in urban forest politics. Table 5.2 summarizes and compares the role and relevance of actors in general and urban forest politics.

5.3

Tension Lines Defining Urban Forest Policies

5.3.1

A Diversity of Traditions – A Diversity of Presences – Segmented Policies?

In many cases urban green-space policy in Europe still constitutes a patchwork of segmented policies, as will also be illustrated by the case studies below. This is mainly due to the fact that present structures have to be seen in the historical context from which they originated. As described in Chap. 2, today’s urban green spaces originate from the representation purposes of feudal courts (parks, urban gardens, urban forests), from traditional public forest domains, and from representation related activities of the 19th century bourgeoisie (private gardens, boulevards, alleys). They also have their roots in the concept of ‘people’s gardens’ (*Volksparcs*) from the late 19th century, partly instituted by rededication of the former categories. This development has to be regarded within the context of rising labor interests across Europe as related to industrialization and its consequences in changing the social fabric of urban agglomerations. Moreover, green space and green-space policy need to be seen in relation to the more recent concepts of urban planning, resulting in new forms of community forestry, and as a most current development the implementation of local Agenda 21-projects.

In those cases where urban green-space management is based upon a long tradition, the institutions and organizations involved in its management also have such a tradition within the respective municipal administration. As a result of this, different types of urban green space within the same municipality, for example forests and parks, are administered by different organizations. Such an insistence on traditional spheres of influence can be seen as hindering the introduction of new, comprehensive green-space concepts (such as urban forestry, for example). On the other hand this competition between different administrative units can also be used at the political decision level as an instrument to reach cost-efficient solutions, for example by allocating newly created areas to that institution offering the ‘best price’ for delivering specific objectives.

5.3.2

Urban Green Space – Accepted As a Public Service?

Urban green-space policy is mostly a policy of public property. In most cases existing policy instruments are focusing on areas in public property. Urban green-space policies can be characterized as the policies of specific branches of the public administration. Most municipal administrations have preferred property strategies when it comes to selecting instruments for realizing public objectives in the field of urban green-space policies. This means that while some regulative instruments relevant to private properties may exist, municipal administrations prefer to transfer land into public property if areas are needed for realizing larger scale objectives, especially in the context of urban green-space strategies. This development can be seen as being slightly in contradiction with forest policies or green-space policies in general at national levels. Here, a trend towards the development of innovative financial policy instruments (e.g., conservation contracts, agro-environmental tools, taxation related instruments) can be seen when it comes to realizing public objectives on a wider scale, on private land (e.g., Davies 2001; Hothersall 2001).

In this context it is also interesting to note that relatively little pressure exists from the side of NGOs, who are well organized and especially active in urban regions, on private areas which are not used for agriculture or forestry, and when it comes to realizing public objectives. While there is some criticism in terms of problems regarding freely accessible green space in urban regions, mainly in countries without universal right of access-regimes such as The Netherlands, this criticism does not lead to a demand for changing the legal framework; rather it is voiced in demands for allocation of more resources to enable municipal authorities to buy more land from private owners.

5.3.3

Private or Public Green Space –

The Problem of Subsidizing Privileged Groups from Public Funds

A host of studies documents that green space in urban regions is increasing real estate market value, regarding both rent as well as purchase prices (Chap. 4, Tyrväinen 1999). This connection is even recognised in those cases where price regulations have been enforced at least for parts of the housing-market, allowing for 'raise-factors' for 'closeness to green space'. This results in the following paradox: The value effect of green space close to developed land can be used to prove its high value, not just through contingency valuation methods, but even through revealed preferences in terms of market prices. At the same time, the high demand for development land close to green space increases the pressure on this green space. The very factor that makes it possible to 'prove' the high value of green space in urban regions is, therefore among the main threats to these green areas. If such green space is private property, this implies that the private owner of green is contributing to the higher value of nearby development land without being able to profit from this. In addition, the owner is facing potential criticism for managing this land for primary production purposes (such as cutting timber). If, on the other hand, a public entity owns these

lands, the public is foregoing potential benefits for developing this land, while at the same time only a limited number of people are enjoying the positive effect of living in the vicinity of green space. A minority which most likely will be constituted from rather well-to-do members of the society, as only households with above average income levels will be able to afford renting or buying real estate in the vicinity of green space. In order to solve this dilemma new approaches will have to be implemented, for example through linking real estate property rights with those for surrounding green space (see Chap. 4).

5.3.4

Urban Green-Space Conflicts Develop along New Front Lines

In the context of general forest policies land use conflicts are usually understood as conflicts between timber production and other land uses (non-wood forest products or services) on forestland. While this principle conflict of objectives is also and in most cases even stronger present in urban regions as demographics suggest a higher protest potential in towns and cities, it seems that the institutions involved in urban forest and green-space management have adapted to this fact. This is at least the case as regards their formal and publicly announced objectives.

The results from comparative studies (e.g., Konijnendijk 1999) show that urban forest and green-space conflicts tend to be more among different 'non-timber land uses', with conflicts between different types of outdoor recreation gaining in importance. On one hand the intensity of recreation activities is increasing due to changes in lifestyles and living standards. This mainly results in a higher demand for recreation in general. On the other hand new recreation activities (i.e. trend sports, extreme sports) constitute an additional demand for recreation areas, especially as such new activities – due to their more dynamic nature – often conflict with traditional activities. To illustrate this one just has to imagine a traditional hiking path in a hilly section of an urban forest, which will be in demand by hikers as well as mountain-bikers. Regulating these new conflicts will be one of the main challenges for urban green-space management and has to be tackled on strategic as well as on tactical levels. So far studies focusing on activity-specific carrying capacities have only been introduced at project level and are not already integrated elements of green-space planning concepts. The development of new products based on 'club-good' strategies (Glück 2000) may offer a possible solution. In the context of management of public lands, however, any form of access restriction may prove to be problematic as regards its acceptance by the population.

The regulation of different recreation activities also points to the new and changed role of institutions involved in public green-space management. While in the past the role of managing institutions was restricted to mere access control and supervision of recreation activities in relation to primary land uses such as timber production or hunting, it is nowadays increasingly moving towards *leisure time moderation*. Consequently, the qualification profile for members of such organizations cannot be focusing on ecological and technical aspects of resource use. Rather will it increasingly have to consider knowledge from the field of social sciences and humanities, as well as related methods and techniques (e.g., moderation, mediation).

5.3.5

Forest in an Urban Environment or Urbanized Forests?

In the frame of urban green-space policy-making it is possible to speak of an ‘urbanization’ of forests and other green spaces, which is shaping the relevant policy processes. The central challenge in this context is not linked to the traditional conflicts between timber production and specific urban demands for various services from forested land. Conflicts rather arise from the variety of demands for urban services to be provided by green spaces and from the competition between green-space land use and other forms of land use, especially development interests.

Forests and green space as part of the urban infrastructure constitute more than just a greening of urban areas. Urban forests and other green spaces have to specifically fulfill urban demands. These demands require more than just reintroducing urban populations to nature and related values. They require urban green-space management to define a specific urban and democratic identity. This will only be possible if it can be liberated from the remnants of rurally inspired resource production objectives, as well as from representation requirements of feudal or industrial aristocracies or 19th century ideas of preserved nature.

In this context, the creation of certificates for specifically urban forms of green-space management would be worth discussing. The current practice that certified urban forest management with labels designed for ‘sustainable timber production’ has to be questioned in this context, as it could be seen as just another variant of a – nowadays considered to be obsolete – ‘Wake Theory’ (German: *Kielwassertheorie*, e.g., Glück et al. 2001). This theory expects a sustainable production of specifically urban services and products by certifying a product, which in the context of urban green-space management only plays a minor role.

5.3.6

Urban Forest Policies Instead of Forest Policies?

Issues that are discussed in the context of urban forest policy-making seem to have only few things in common with what is discussed in the context of forest politics, especially at European levels. As timber production is not seen as a primary management objective, there is a much lower level of conflict between timber production and conservation objectives within urban forestry. In addition, as management of urban green space is mostly in the responsibility of public organizations, the strategies of relevant actors are based on different rationales than of those in processes eventually resulting in a new definition of property rights and obligations.

When assuming that the majority of conflicts within forest policy processes result from a general value change within (Western) societies towards post-materialistic values and attitudes – which are also linked to an ongoing process of urbanization of societies – it might be expected that conflicts related to urban forest and green-space politics are but a precursor of what may come to dominate general forest politics in the future. This assumption has proven correct insofar as empirical results show that post-materialistic values have a central importance as regards urban green-space conflicts (e.g., Konijnendijk 1999). On the other hand the central problems and conflicts

in the urban green-space policy field are specifically linked with the conditions in urban environments, that is when relating to urban in the context of conditions which can be expressed in terms of population density and development activities. High pressure from different types of recreation activities, and related land-use potential and land-use conflicts as a result of demands from other land uses (either through immediate competition for land resources or negative externalities) are the central themes in urban areas. However, these are only of limited relevance in a more general context of forest politics.

The specific land-ownership situation for green space in urban regions as being mostly public property constitutes a particular situation, at least within the context of the 'old' 15-member European Union. As a result of this specifically urban problems of forest and green-space politics and policy are not treated in general forest political processes. The latter are more focused on the regulation of conservation-related conflicts and the specific problems linked to the domination of private, small-scale property as the main form of forest ownership in Europe. The urban forest policy field can thus be seen as being clearly distinguishable from the general forest policy field. But as the urban forestry concept clearly encompasses more than only forest ecosystems, it is obvious that forest policy only does not suffice.

Specific urban definitions of green-space management still need to be developed. Such definitions have to be more than a mere transfer of natural areas into urban environments, but will have to be developed around specifically urban identities. The result of such developments may differ significantly from what is today understood by many under the term 'urban forest', but may be better suited for fulfilling the demands of urban societies.

5.4

Overview on Urban Forest Policy and Planning in Europe

5.4.1

European Case Studies of Urban Forest Policy and Planning

In order to provide an overview on urban forest politics in Europe case studies are presented here which were undertaken during 1999–2000, by country representatives of COST-Action E12's Working Group 1 'Objectives and functions, planning and design'. The selection of cities within countries was left to national experts.

Within the – more extensive – qualitative part of the survey of selected cities, information on conflicts was collected, together with information on the content of relevant policies and related instruments. Focus was on recreation, as recreation is usually seen as the most important function of urban green space by urban citizens (Ottitsch et al. 1999). A SWOT (Strengths-Weaknesses-Opportunities-Threats) analysis was part of the survey and resulted in a rudimentary evaluation of respective urban forest policies. Moreover, the analysis indicated trends in the field.

Only those responses that provided information suitable for a comparable presentation and analysis of results are presented here. Information comes from fourteen municipalities in eight European countries. While this does not allow for generalization of results at the European level, the results provide an indication of urban forest

policies in Europe; for instance, covering the main European regions' respective problem situations. Results are presented from forest-rich, scarcely populated regions of northern Europe, densely populated regions in north-western Europe, urban regions of central-Europe (including densely populated mountain regions of the Eastern Alps), and the Mediterranean areas of southern Europe. With the example of Slovenia, the study also contains one country in transition, albeit one which is usually seen as being on the forefront with regards to adapting to a market-economy and democratization of society.

5.4.2

Summary of Quantitative Indicators for the Case Studies

Table 5.3 provides an overview of data on population size and green space in the studied municipalities.

Table 5.3. Data on green space, total area and population for the selected case studies

Town	Greenspace			Inhabitants ^a
	Total (ha)	% of total town area	m ² / inhabitants	
Copenhagen	2 030	23	15	1 381 200
Oslo	3 380	67	68	500 000
Ljubljana	4 885	56	173	281 913
Celje	1 510	56	301	50 239
Geneva	369	23	22	171 675
Zurich	3 955	43	118	335 741
Athens	454	^b	6	734 435
Thessaloniki	350	^b	9	386 740
Amsterdam	5 884	27	81	718 175
Arnhem	4 286	44	321	133 272
Helsinki	5 509	30 ^c	101	546 317
Reykjavik	23 400	10	2 167	108 000
Akureyri	10 000	12	6 667	15 000
Vienna	10 437	25	65	1 608 144

^a Source: www.population.com, 09/00.

^b No information provided for this category by national respondents.

^c Helsinki: percentage refers to land area!

The names which are used are those which are used when reference to the respective municipality is made in English language texts. All quantitative data are usually referring to the area within the municipal administrative boundary (MAB). The actual size of the relevant urban agglomeration is in some cases larger than that, but the distinction had to be made to allow for a better comparability of data.

As the comparison of population data from Table 5.3 shows, the case studies represent a rather wide spectrum of what is usually referred to as ‘urban’ in a European context. Vienna, Copenhagen, Athens and Amsterdam at the upper-end of the range of population size represent the ‘medium’ category of European metropolises within this study, especially when taking into account that in the case of Athens and Amsterdam the actual size of the urban agglomeration is by far surpassing the municipal administrative boundaries (MAB). Unfortunately, the study does not include European examples for ‘World Metropolises’ (e.g., Paris, London, St. Petersburg).

5.4.3

Analysis of Main Issues, Key Functions and Policies Based on Case Study Results

Table 5.4 (see p. 130, 131) provides an overview of the main issues and policies in the selected case studies. The survey studied the relevance of regulative instruments, the importance of different functions of green space, the specific forms of participative processes, and the importance and relevance of NGOs. Also studied were the use of information policy instruments that specifically focused on activities in the field of (public) education and information. The issue of financial instruments could not be covered in detail. However, it is briefly touched upon in the analysis below.

Relevance of Local Legislation in the Field of Regulative Policy Instruments

The case study results indicate the high relevance of local (i.e. municipal) legislation as regards the development and implementation of regulative policy instruments for urban green-space policies. This indicates a high level of devolution within this policy field. It is especially interesting to note that this trend can be seen across all case studies, independent from the general national political framework, as determined by the respective constitution, having a more centralized or more decentralized character when it comes to natural resources policies.

One reason behind this phenomenon is the high importance of municipal land property in the field of urban green-space policies. Strategic decisions, for example regarding the zoning of different functions of urban green space, are mainly made as land owner’s decision of municipal authorities on their own properties. Thus a ‘property strategy’ is applied rather than implementation of public regulations on private lands. Consequently, municipal authorities try to buy land, which is needed for major urban green policies from private owners, rather than attempting to integrate private properties into such projects.

Nevertheless, in most cases municipal authorities also exercise administrative authority over green-space areas in private hands. Having said this, there is a difference between areas that are in use for agricultural or forestry production, and areas that are not used for income purposes (i.e. private gardens or parks). As far as the former is concerned, the usual national or regional regulations (for example for forest land use) apply. Private gardens, on the other hand, are not subjected to very detailed regulations as regards management regimes. Unless such areas fall under forestry-regulations, the owner is to a large extent free as regards individual objectives (e.g. gardening style, plant selection). Usually it is only the general zoning declaration (green space or devel-

Table 5.4. Comparative presentation of case study findings within the context of urban forest policy

	Copenhagen (DK)	Oslo (NO)	Celle (SLO)	Ljubljana (SLO)	Geneva (CH)	Zurich (CH)	Athens (GR)	Thessaloniki (GR)	Amsterdam (NL)	Arnhem (NL)	Helsinki (FI)	Reykjavik (ICE)	Akureyri (ICE)	Vienna (AT)
Relevance of laws and ordinances														
National/federal	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Regional					X	X			X	X	X			X
Municipal	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Main functions recognised														
Social (recreation etc.)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Amenity (water/air quality, noise reduction, aesthetic values, living environment)		X	X	X	X	X	X	X	X	X	X	X	X	X
Ecological (conservation for 'its own purpose' – without social objectives attached)	X	X	X	X	X	X			X	X	X			X
Economic (timber)										X	X			X
Structures for public participation														
Representational democracy (city council etc.)	X	X	X	X				X	X	X	X	-	-	X
Institutionalised public participation at strategic level	XP	XP	XP	XP	XA	XA			XA	XP	XA	-	-	
Institutionalised public participation at tactical level	XA	XP	XA	XA	XA	XA	XP	XP		XP	XA	-	-	
Informal de facto participation (activities at grass roots level)		X			X	X		X	X	X		-	-	X

Legend: Presence of factor indicated by 'X'; most important factor within each group indicated by 'X' (*bold print*); '-' indicates that no information was provided for this city; A = (*ante*) co-ordination before or accompanying planning process/activities, P = (*post*) consultation after planning process/activities.

Table 5.4. *Continued*

	Copenhagen (DK)	Oslo (NO)	Celje (SLO)	Ljubljana (SLO)	Geneva (CH)	Zurich (CH)	Athens (GR)	Thessaloniki (GR)	Amsterdam (NL)	Arnhem (NL)	Helsinki (FI)	Reykjavik (ICE)	Akureyri (ICE)	Vienna (AT)
Interest groups														
Organised interests (e.g., professional associations)			X	X		X	X	X	X		X	X	X	X
International NGOs							X							
National NGOs							X		X	X	X			X
Regional/Municipal NGOs		X			X	X	X	X	X	X				X
Ad hoc groups		X	X	X	X	X		X		X	X			X
Educational Programmes														
Public education activities by managing institutions (forest schools etc.)		X	-		X	X	-		-	X	X	X	X	X
Public education activities by other institutions/organisations (e.g., conservation)						X	-		-	X		X		
Activities by or in co-operation with educational institutes			-			X	-		-	X		X		
Special educational infrastructures (demonstration forests, etc.)			-		-	X	-		-	X				X
Professional education and research co-operations			-	X	X	X	-	X	-	X	X			X

Legend: Presence of factor indicated by 'X'; most important factor within each group indicated by 'X' (*bold print*); '-' indicates that no information was provided for this city; A = (*ante*) co-ordination before or accompanying planning process/activities, P = (*post*) consultation after planning process/activities.

opment area) which has the character of a regulative instrument. In addition there also exist laws regulating the management of trees outside of forest areas, primarily tree protection acts or ordinances. These foresee, for example, the need for permits for cutting down trees and obligations for substitute-plantings if trees have to be removed. In general, civil laws governing the mutual obligations of neighbors are more relevant. So far no extensive comparative evaluation exists of the implementation of regulative instruments for urban green space as far as municipal legislation is concerned.

Social Functions As Most Important Management Objectives

The comparison of the importance of different functions of urban green space at local level shows that in general *social functions* are seen as the most important and consequently receive the highest share of attention by policy instruments. This refers especially to recreation. High relevance is also attributed to so called *welfare (or environmental) functions* (water quality, local climate, filtering of air and water), which are usually ranked before *conservation goals* (see also Chap. 4). Only three of the investigated case studies (Arnhem, Helsinki, and Vienna) name timber production as a relevant objective. This ranking of priorities, which is the result of an expert-assessment, is supported by the results of empirical research (for example, Ottitsch et al. 1999) on the preferences of urban citizens in Europe as regards green-space functions. It is interesting to see that obviously nature conservation goals are not ranked first when it comes to preferences for urban green-space management objectives, given the fact that urban populations are usually more supportive of conservation goals than rural citizens.

Supply of and Demand for Public Participation Possibilities

One of the central features of urban forestry is the high importance of public participation possibilities at strategic as well as tactical levels of planning and management (see Chap. 8).

Almost all of the cases show the existence of institutionalized models for public participation, offering levels of democratic involvement in decision-making processes, which surpass the traditional options within representative democracy for legislative and executive institutions.

Public participation possibilities are offered at strategic (development of general plans and *green-space strategies*) as well as at tactical (management plans) levels. The approaches found within the case studies offer participation both as reactive as well as proactive coordination. The former usually constitutes a possibility to comment upon and appeal against concepts designed at administrative levels, whereas the latter involves public opinion already in the phase of program development. Even in the cases where no institutionalized (i.e. legally regulated) possibilities exist for public participation, informal participation has been introduced by members of the public administration. Quite often this had happened as a reaction to preceding incidents of public protest against public policies or management actions.

The case comparison also shows that public protest occurs as well when formal possibilities for public participation are offered by the administration. This means that the full demand for participation by all segments of the public cannot always be satisfied by institutionalized offers for participation. Also in this context the need for

scientific evaluation of available participation options and the connection between such policies and actual conflict situations has to be stressed.

Relevance of Non-Public Actors

Within the study research into the relevance of non-public actors, meaning actors from the field of NGOs has been regarded to include the full spectrum from ad-hoc initiatives to semi-public institutions (e.g., mandatory-membership land-owners associations). The study showed that in the context of urban green-space politics local actors are of central relevance. This constitutes a clear difference between the fields of urban green-space politics and general forest policy processes, as in the latter non-public actors are usually present in the form of 'institutionalized interests' (i.e. traditional land-owner associations, trade and labor unions), and national as well as international environmental NGOs.

The Use of Informational Instruments – Information and Education Activities

The study also investigated activities by relevant institutions in the field of education and training. The most common example in this context consists of initiatives by green-space management institutions offering green space-related education to the general public. This is often also done in cooperation with public education institutions, especially schools, often through joint activities such as excursions or more action-oriented events such as tree planting or park clean-up days. Regarding cooperation with scientific institutions, it was reported that most management institutions cooperate with universities and other research institutes through research projects.

These education-related activities can be interpreted in two ways. On one hand they can be seen as a response towards the growing demand for nature-related information from the general public and thus a customer-friendly policy by green-space management institutions. On the other hand these activities also have to be seen in the light of ongoing discussions on the reduction of public budgets in Europe in general. In this context, such activities, which are extending the portfolio of activities of management institutions to new fields, could also be interpreted as an effort to legitimize the allocation of increasingly scarce financial and personnel resources. This is done through the familiar strategy of 'extension of responsibilities' out of the arsenal of traditional strategies of public bureaucratic institutions.

The Use of Financial Policy Instruments in Urban Forest Politics

As private actors are not among the main addressees of urban forest policies, traditional financial policy instruments such as incentives or taxation have only been of low importance. This can partly be explained by the nature of the main objectives and issues in urban forest politics, as well as by the role of different actors or – more precisely – by the absence of a strong representation of private owner interests.

The most relevant, direct financial incentive for private land-owners in the context of urban forest politics are incentives to provide public access to private lands. This occurs in those countries where such access is not foreseen through some sort of universal right in the national or regional forestry legislation.

More recently some financial policy instruments have been developed in several of the covered case studies and also in the context of providing additional nature conservation services. This is done in accordance with a trend in general forest politics to ensure conservation values on private lands outside of major protection areas by individual contract agreements.

If financial instruments are regarded from a broader perspective, however, any financially relevant intervention by the government into a market economic system has to be regarded. This also includes the direct activity of the government on private markets as well as the direct provision of goods and services at no, or below market level, costs. Consequently the 'property policy', which has been identified as being among the most frequently-used approaches by municipal authorities for forest and green-space provision and management, also has to be regarded when looking into the use of financial policy instruments in urban forest politics. This includes the provision of funds for the acquisition of land, as well as the budgeting of public institutions' management activities.

With a few exceptions, precise information on the costs of green-space management could not be obtained within the case studies. The reasons for this are:

- Insufficient information on the extent of green space in private property and therefore on the private as well as public costs involved in the management and administration of these areas
- Divided responsibility for different categories of green space among different public institutions (park services and forest services)
- Problematic allocation of cost positions within public administration units, partly as a result of an insufficient differentiation between the costs for exercising of 'public authority' and 'management' of public lands, partly because of a sharing of resources used for green-space management with other areas of public administration (e.g., street cleaning, maintenance of roads and other infrastructure)
- Restrictive information policies of public administrations on financial issues, especially as regards public personnel

Results of a SWOT-Analysis

Analysis of Strengths, Weaknesses, Opportunities and Threats is aimed at assessing the main current issues, as well as the possibilities for development of urban forest policies in Europe. Table 5.5 (see p. 136, 137) constitutes a summary of responses aimed at showing the main commonalities as well as differences between the cases studies.

Strengths

The most interesting result from the analysis of strengths is that 'the interested public' is mentioned as being the most important factor in this context. This points to the high relevance of activities in the field of public relations and public participation. Such activities have to surpass the level of mere information and advertising, and have to include involvement into decision making processes at strategic as well as at tactical

levels, as is also mentioned in Chap. 8. Another factor named as strength in the majority of the case studies is the existence of a comprehensive urban green-space concept or strategy. These issues will be discussed further below. 'Positive attitudes' of decision makers are also mentioned as strengths, although one might suspect that such attitudes should be attributed mainly in those cases where they are supported by political decisions resulting in more or less generous allocation of public resources.

Weaknesses

In line with what was mentioned above, it is interesting to note that in several of the case studies 'positive attitudes from political decision makers', mentioned as strengths, occur together with 'financial cuts/restrictions', mentioned as weaknesses, often accompanied also by 'political power of development interests'. As both of these weaknesses lie within the sphere of policy development and implementation (public budgets and zoning plans) it may be questioned in how far the 'basically positive' attitudes of decision-makers may actually be accounted for as strengths if they are not manifested in according policies. Of course the reason may also be that while green space in principle enjoys the support of (some) political decision makers, other areas of public policy, such as health or social issues, as well as development interests enjoy an even higher support. This is especially true as investments in these fields may provide more tangible results, at least in the short term.

A similar contradictory situation can be seen in the cooccurrence of 'comprehensive green-space concepts' as strengths and 'lacking implementation of existing plans and concepts' as weaknesses. It has to be analyzed in how far such implementation failures may be the results of insufficient planning, more precisely a lack in dealing with conflicting issues through adequate planning mechanisms and thus transferring their solution into the implementation phase.

Opportunities

Three of the issues mentioned in this summary as 'opportunities' lie within the domain of the political process, and more precisely within the phase of agenda-setting. The mobilization of public interest, as well as increased lobbying activities, are seen as suitable tools to bring green-space issues to the urban political agenda. The analysis of original survey questionnaires has shown that the ultimate purpose of such a mobilization is seen in the attempt to result in the allocation of higher resources from public budgets for public green-space management.

Threats

Regarding potential threats to green-space development in the case studies, the situation presents itself as being rather heterogeneous. Among the external factors listed in this context are problems, which can be summarized as being the result of ecological factors. Many of these are linked to climate conditions, including related human activities such as use of de-icing salt, together with other human caused factors, mainly pollution and, especially in Southern-Europe, fire.

Table 5.5. Results of SWOT-analysis

	Copenhagen (DK)	Oslo (NO)	Celje (SLO)	Ljubljana (SLO)	Geneva (CH)	Zurich (CH)	Athens (GR)	Thessaloniki (GR)	Amsterdam (NL)	Arnhem (NL)	Helsinki (FI)	Reykjavik (ICE)	Akureyri (ICE)	Vienna (AT)
Strengths														
Existing 'green plan/strategy' for the city	X	X	X	X			X	X			X			X
Positive attitude from political decision makers	X	X		X	X		X	X			X			X
Good tradition of urban greenspace management	X		X		X	X		X			X			X
Interested public		X		X	X	X					X			X
Administrative reforms (co-operation or merging of different departments)				X										
Weaknesses														
Financial cuts/restrictions	X				X	X				X	X			X
Political power of development interests		X	X	X		X		X		X	X			X
Unsatisfactory implementation of legislation/programs/plans			X	X										
Lack of legal protection for greenspace			X								X			
Pressure resulting from increased use					X									
Ownership structure (fragmented)			X	X										
Lack of public awareness			X				X							

Legend: Presence of factor indicated by 'X'.

Table 5.5. Continued

	Copenhagen (DK)	Oslo (NO)	Celje (SLO)	Ljubljana (SLO)	Geneva (CH)	Zurich (CH)	Athens (GR)	Thessaloniki (GR)	Amsterdam (NL)	Arnhem (NL)	Helsinki (FI)	Reykjavik (ICE)	Akureyri (ICE)	Vienna (AT)
Opportunities														
Increasing public interest/participation		X	X	X	X			X		X	X		X	X
Innovative methods, technology		X		X		X		X		X	X			X
Development of public interest		X	X	X	X		X	X		X	X		X	X
Political lobbying					X	X								
Threats														
Stress factors (e.g., pollution, salt, diseases, poor water supply, wind, harsh climate)		X				X	X	X				X	X	X
Social problems (vandalism, loitering, etc.)	X				X	X	X	X	X					
Urban development pressure	X		X							X	X			
Gaps, lacks in management know-how			X	X				X						

Legend: Presence of factor indicated by 'X'.

It should be stressed that those threat scenarios which are mainly based on social problems, i.e. vandalism and other crimes, seem to occur in countries that represent a rather wide range of political culture and social conditions. Therefore, the reasons behind this have to be investigated in a broader context.

Urban development pressure, which was also listed among weaknesses, was also named in the threat-category.

Summarized Assessment of the SWOT-Analysis

In summary, the following conclusions can be drawn. Positive as well as negative factors are linked intrinsically with the positioning of green-space management within the general urban policy arena and conflict fields. Factors related to the implementation of public relation and public participation contribute both to weaknesses as well as strengths. Improvements or further developments in this field are seen as the major potential for a general improvement of the position of urban green-space policies and management. This connection has to be seen especially from the point of view of managing institutions. These institutions expect an improvement of their position within the general urban administration through higher support from the general public in order to position themselves better in the competition for resource-allocation.

Strengths and potentials have to be seen in close connection with weaknesses and threats. Among the potentially negative factors, competition from other land-uses, especially the development sector, is seen as the most serious threat to urban green space. The major political power of development interests (i.e. the construction industry) is criticized as being one of the major problems for the political positioning of urban green-space planning and management. In accordance with this assessment is also the fact that improved lobbying activities are seen as a possibility to improve this situation. Consequently segments of the general population who are interested in public green space are seen as potential allies who could be activated in order to demonstrate the high political relevance of green-space management to political decision makers. This need for a higher mobilization of public opinion, however, is not seen as urgent in those cases in which institutions involved in public green-space planning and management seem to enjoy a rather powerful position within their respective urban administrations.

5.5

Towards the Development of a Theory of Urban Forest Policy

5.5.1

Analysis of Actors and Processes

After having provided an indicative overview of urban forest policy in Europe, the general political framework for urban forestry can be analyzed further applying the basic assumptions of analytical policy theory (Krott 2002). Actors and processes are analyzed which determine the problem solving. Problem solving by urban forestry needs specific programs for multiple use and users, suitable forestry institutions, and specific strategies for collaboration with the urban stakeholders. The users of urban for-

ests are 'drivers' through their needs, but also in their resources, access to the forests, and organization, as the above case studies have illustrated. They all focus on urban woodland and trees, which are small or few compared with the number of people interested in them. Therefore these ecosystems and vegetation elements in urban areas are exposed to user demands that frequently exceed their ecological potential.

Urban forestry institutions have become part of the municipal administration. These types of administrations differ from administrative institutions at other political levels, such as national or regional. They are forced to play many roles at the same time, as they are entrepreneurs in securing the basic supply for people in terms of housing, transportation, water and recreation. Simultaneously, the municipal administration implements and controls many laws like an authority. Additionally, the administration represents the political organization of urban people, with focus on the mayor, who is at the same time the political representative of the people and the head of administration. Being part of such a dynamic, complex institution offers specific chances for urban forestry institutions.

In the context of urban forestry and other green-space policies and management, municipalities thus act as land-owners, with an interest in gaining benefit from land management. They also have the role of a legislative power, which in the context of land-use decisions is manifest through legally-binding land-use zoning as well as through regulations governing individual land-uses. Municipalities also have executive power within their jurisdiction and are responsible for the supervision of relevant legislation. Institutions dealing with urban forestry and urban green-space planning and management at large are often involved in all these functions. They may have an advisory role in the development of relevant policies, they are in charge of managing green space, and they have to police green-space regulations within the respective autonomy given to municipal governments within the specific national or regional context.

Finally, urban forestry programs and institutions have to deal with the specific stakeholders in urban areas. As seen before, interest groups and the media are very active in urban areas. Citizens, political parties and politicians are aware of the forest, but mainly as a subject and symbol for 'green' politics. The level of conflicts is high but the options for problem solving are rapidly changing. The high dynamics of the political process dominate every urban forestry strategy, but handled in the right way these dynamics could be used for supporting these strategies too.

Political theory offers strong analytical categories and explanations for actors, instruments and processes of urban development, including forestry. A selection of the most relevant factors within the recent urban development guides to four critical factors causing a crisis to sustainable urban forestry on the one hand, and to three factors providing new opportunities for innovative urban forestry on the other.

5.5.2

Factors Causing Crisis

Urban forestry aims for much more than sustainable, profitable wood production. It wants to optimize the protection and use of trees and woodland within urban areas. This goal is in principle a public good, as every inhabitant can benefit from advantages

of healthy, multifunctional green areas. The demand for free public goods is very often higher than the supply. Due to this simple economic fact, the demand for healthy woodland and trees within densely populated areas is usually higher than the supply. Urban forest and green cannot be other than scarce, causing pressure on managers devoted to serving urban needs with urban green.

Urban forestry shares the fate of falling behind its own goals with all other public programs aimed at public achievements. The exceptional situation here is that shortcomings will grow beyond the usual stage due to specific factors typical of urban forestry and urban areas:

1. The guiding concept of sustainable urban forestry is unclear. Sustainability of the forest makes sense within a sustainable urban community only; if the town is not sustainable itself, survival of trees makes no sense at all. The strong tendency of area-wide sprawls of housing, shopping centers and industry is seen as the major threat to sustainable cities due to the huge consumption of land and traffic increase causing pollution of water and air (Hesse and Schmitz 1998). If the pressure of growth is overwhelming, it should be concentrated into new centers. The first approach to counter the problem of sprawl aims at designs for the concentration on and restriction to urban centers as a solution for sustainability, and is therefore named 're-urbanization'. The second approach doubts the sustainability of big centers and aims to guide the sprawl of housing, offices, industries and traffic lines into a new structure consisting of decentralized networks of housing, working, consumption and cultural facilities, with main traffic inside the network. The version of 'decentralized networks' would save green space and traffic lines compared with the sprawl caused by centers just expanding into their surroundings ('infill'). Whether the restriction to different centers or the reorganization into decentralized networks is the more promising option for sustainability remains unclear.

Both versions have completely different implications for future urban forestry and green-space planning. If future development is concentrated within existing urban centers, then green space around these must be strictly protected to ensure a sufficient supply with all the benefits which can be derived from green areas. At the same time, a (re-)greening of centers in the form of street and courtyard green as well as smaller park-like areas should increase the attractiveness of urban centers. If on the other hand a network of smaller urban centers is being aimed at, this would inevitably require the sacrifice of some now peripheral green areas for the creation of new centers of housing and commerce. To a limited degree this might be compensated by the re-greening of older built up areas whose function may become obsolete in the new concept (e.g., former industrial sites in areas with a primary function as living quarters).

The contradiction between the two concepts of sustainable urban development means that the concepts of urban forestry and urban green-space planning that want to support sustainable cities cannot follow a clear guideline. Having no clear line for the central issue of sustainability is weakening the concepts whenever the necessity of justification of specific needs of urban forestry arises. In some way the concept of urban forestry is still unable to clarify its most important goal!

2. The potential for implementation of well-planned urban forestry is very limited. Let us assume that some time in the future integrated urban planning is able to provide a clear direction for urban sustainability. In this case comprehensive planning for urban forestry could show the way for sustainable management of urban forests. But here the story of success will end. Each step of implementation of the 'green plan' will have to overcome overwhelming economic and political forces. In this regard urban planning as a whole is a very weak partner for urban forestry and green-space planning at large. Urban development is driven by powerful economic enterprises competing on markets. They promise tax revenues and employment to the town. But they also know their value and importance. The town prefers to do accommodate their demands for land and infrastructure within the different development plans. The strength of the enterprises can empirically be seen by the growing sprawl of shopping centers, industry and office complexes in the surroundings of urban areas, which is in contradiction to the different concepts of urban planning (Hesse and Schmitz 1998). Planning does not change much of the market-driven development in which urban green is just a residual factor that has to adapt to new projects and traffic lines. The formal procedure requires coordination of economic development with all other sectors and plans, but in the implementation hardly any freedom is left for implementing a green plan demanding respect for green needs (Roth and Wohlmann 1994).
3. The ecological pressures on urban forests are hidden and unseen to the public and politicians. Forests and trees are changing all the time, but change is slow both in a good and in a bad direction. Worsening conditions of air, climate and soil in cities increase the stress on each tree but the tree does not immediately stop growing. Loss of green areas to buildings or traffic may be small in the individual case, but add up to a huge damage to green potential. Loss of biodiversity within the green elements is even more difficult to detect (Schulte et al. 1997). When trees become older, their vitality decreases, while diseases increase. Renewing and planting new trees is inevitable, but again, new trees grow slowly and the expected positive effects will only be observed decades later. The slow development of urban forests means that 'the reduction of maintenance activities is not readily apparent to city residents in the short run, but may have a tremendous long-term impact on the urban tree resource' (Tate 2000). Major costs of not doing enough today will occur in the future only. Long term damages and costs are weak arguments compared with public budgets. Sectors that can immediately show negative feedback to relevant groups from budget cuts gain stronger support for their needs than urban forestry, which is forced to spend money to prevent long-term negative effects.
4. Funds for urban forestry are shrinking along with the general decline of public budgets. The economic recession during the first years of the third millennium has forced most European governments to employ austerity policies. Even without economic recession, a reduction of taxation levels in order to improve international competitiveness, and the related necessary cut-down on public spending have been the main political credo of the last decade. For long the most important goods and services derived from urban forests and green space have effectively been produced as public goods, free of charge to individual beneficiaries, funded from public funds.

In relation to the above mentioned economic factors, municipal revenues do not match the growing costs for infrastructure and administration. Making debts has provided municipalities with means for active policy, but the amount of obligations has reached its limits in many of them. Like other public entities they are forced to cut back and to focus on the most essential services. Reforming the municipal administration is to a large extent aimed at prohibiting the growth of the public budget. In most towns urban forestry and green-space management is fighting with little success or none at all to save itself from budget reductions, and prospects to cover the growing costs by public funds are gloomy.

As one potential way to solve the dilemma of increasing demands and decreasing public funding economists have recommended – for many areas of public activity – that the private user who has the benefit or who causes the damage should pay personally (Wicke 1994). Ongoing discussions on the introduction of road pricing, which in some inner-city areas is currently being implemented, are but one indicator for this. Unfortunately users do not appreciate such a concept. They are accustomed to free use of the public goods of urban green and are not willing to pay for general damages their activities like housing or car driving are doing to the environment. Science has developed a variety of models of how to establish economic instruments to collect money from users causing externalities, and progress can be made in practice (Mantau et al. 2001; see also Chap. 4). Nevertheless, as long as existing externalities cannot be overcome by economic instruments, urban forestry will suffer from an indisputable lack of income from private users compared with forests that are mainly producing wood for markets.

The four trends discussed above will cause severe problems to urban forestry in the future as well. It will not be easy, even with intensive research, to clarify the concept of sustainability of urban areas and its meaning for urban green. The implementation of green plans within urban dynamics will in practice be nothing more than an exhausting fight against interests mostly stronger than forestry. Selling a preventive strategy against long-term threats for green areas to citizens and politicians will remain an extremely difficult task, and funding will be short of public and even shorter of private sources. It depends on the policy standard chosen for comparison whether the conclusion is that urban forestry as a comprehensive concept is one of the most difficult aims to achieve, or that the crisis of urban forestry is evident.

5.5.3

Factors Offering New Options

Market Driven Development Projects

For weak urban forestry, it makes sense to look for strong allies. An interesting target group could be smaller and bigger urban projects which are driven by profits to be earned on markets. An example for such projects are new urban entertainment centers, new urban housing districts on the urban fringe, renovation of housing districts inside town, new shopping and office centers on the fringe, or transformation of abandoned industrial areas.

The forces behind these market-driven development projects are strong. Investors seek new opportunities to make money. Marketing and management of the projects are professional in the way industry handles its projects. The projects offer tax revenues and employment to gain the support of the politicians. Administration reforms encourage private-public partnerships to use the dynamics of private investors and management. They simultaneously guarantee the influence of the administration to secure public goals.

The economic and political rationale of these projects cannot be discussed here and it is beyond the task and influence of urban forestry. The challenge for urban forestry is to find out how trees and maybe forests can serve the needs of these projects, and to explore new opportunities. Looking at the programs and practice of urban planning, new chances can be identified.

New urban districts have been built at the urban fringe (Wiegandt 1997). Berlin and Freiburg in Germany, for example, designed and implemented building projects on areas of 60 ha and 80 ha, developing housing facilities for 5 000 and 10 000 residents, respectively. The investors are public and small private ones. The entire area is designed by means of a comprehensive concept offering proactive green planning chances to participate. In Freiburg, 25% of the entire green area of 320 ha was used for housing, and the remaining area is envisaged for nature preservation. Architectural variety and the creation of public spaces including green areas provide significantly higher urban development qualities than the sprawl of individual housing fighting its way into the urban fringe.

Another type of project consists of the new shopping malls, sometimes developed in combination with new recreational centers or new office centers in the urban fringe. Projects destroy green areas but at the same time need an excellent design and high amenity value. Trees and forests could play an important role if the aesthetics of integrating trees and buildings are developed further. Offices shadowed by trees might be quite prestigious. The traditional preference for closed forest separated from buildings does not offer innovative options for the needs of such new projects.

Even in city centers trees are very necessary. On the one hand large abandoned buildings of former factories or hospitals, which have been moved to the fringe, are looking for follow-up uses of which recreational facilities with trees could have their share. On the other hand, dense housing in the city needs green elements to become attractive again, combining garden elements with excellent access to downtown facilities (Kühn 1998). There is a need for innovative models bringing green and trees back into existing built up structures.

The discussion among planners and architects teaches urban foresters that within new projects there is need for green elements for which woodland and trees could prove innovative models. Compared with comprehensive green planning, the advantages of such projects are their strong financial basis and their professional management which can be expected to turn the plans into reality.

Symbolic Communication by Forests

In urban areas human activities reach their highest intensity. People meet, cooperate, but also get into intense conflicts, which is a perpetual challenge for maintaining the community. Therefore, maintaining social cohesion is an important task for urban policies.

A stable basis for peace is a sufficient and just supply of basic facilities, such as housing, employment, health care, recreation, and cultural and green sources for every inhabitant. Urban policy is devoted to such public goals, but a shortage of resources and a distribution of wealth, which is determined by the economic system, lead to a result remote from the goals (United Nations Centre for Human Settlement 1996). Policy needs additional instruments to foster the community and keep it in peace.

If the situation is bad, people must have hope. They need a feeling of trust in the town and future development. Municipal politicians play a key role in offering hope to citizens, motivating them to participate in the development of the town or at least to accept the given opportunities. Political communication cannot do this difficult job by means of technical explanations only. The task of urban development is too complex to be discussed in public on a pure factual basis. Communication with the public relies to a large extent on symbolism. This does not explain things technically, but condenses 'into one symbolic event, sign, or act patriotic pride, anxieties, remembrances of past glories, of humiliations, promises of future greatness: some one of these or all of them' (Edelman 1985). Evoking emotions is as important as explaining facts. Symbolic communication has a great impact on the public perception of urban policy, and on the peaceful town life together.

Foresters love forests, but they should know that the public perception of forest in Europe is also full of condensed symbols. The media are sensible to symbolic aspects related to forest. A survey of the press coverage of the Erster Deutscher Waldgipfel (First German Forest Summit), the most important German public forest event in 2001, showed that 50% of all messages about forests use symbols evoking emotions. Most prominent are 'sustainability', 'German', 'recreation', 'forest dieback' and 'home' (Krott et al. 2002). 'Forest' is a suitable symbol for positive feelings like home or sustainability, but it can also signalize huge threats, as in the case of forest dieback.

Combining the highly symbolic contents of forest with urban policy's need for symbolic communication, urban forestry offers the chance to meet a key need of urban policy. Even today the specific urban forests are a significant part of the identity of many cities and towns, for example the Wienerwald in Vienna. Political communication has to continuously renew symbols of identity in order to keep the community together. The message needed is not mainly on what happened in the forest, forest benefits and activities for maintenance, but rather the forest's emotional role in terms of town image to be the best and a unique home to be proud of, with a challenging future full of hope for everybody.

Of course, the public discourse is already full of issues, and the media are oversupplied with news. Active public relations are needed to catch the attention of the media and the public. In addition to communicating events in urban forestry professionally, specific 'produced media events' are a promising technique to take part in the symbolic media discourse (Krumland 2000). A single tree planted by a visiting president is a big step for the forest to become part of the identity of the town, and to strengthen the identity even if the tree is a completely insignificant contribution to the forest in an ecological sense. Producing media events by using the forest to shape symbolic messages is a product of urban forestry, which meets the strong demand of urban symbolic communication.

Due to the hard competition of sectors and stakeholders to become part of the symbolic message and image of the town, only a few produced forestry media events will get through. But whenever a media forestry event occurs, a window of opportunities opens for a short while. In this very moment urban forestry has the attention of the public and politicians. Such support provides one of the few opportunities for urban forestry to achieve the desired decisions. In the long run, being frequently part of the symbolic communication of the town significantly strengthens the position of urban forestry.

Integration of Fringe Groups

Green areas and especially forests are public open areas in town. Most of the time access is free of charge, and although many things are forbidden, the freedom for different uses is larger than in most other public urban areas. Therefore it is not surprising that the forest attracts fringe groups. Due to their incomplete assimilation these prefer activities for which the town does not offer sufficient or affordable facilities. There are, for example, immigrants and ethnic minorities, who are accustomed to open air meetings and activities but live in small flats without gardens, backpackers, homeless people, drug addicts, prostitutes, and so forth. The variety of fringe groups is huge in modern towns.

Taking care of fringe groups is a big issue for urban social policy. Supporting the integration into urban life is a complex issue that cannot be discussed here due to space limitations.

Urban forest policy's task could be a mixture of two basic strategies. Firstly, green facilities can contribute to solving problems associated with fringe groups. If people need a place for a barbecue and have no private garden, forests and parks do offer such places. The management problem is to maintain security and amenity of the area, and to handle conflicts among barbecuing and other activities. This is not a question of discipline only, but a challenge to understand the users' needs and the habits of minorities that differ from the traditional native habits. Difficult problems have to be solved with regard to scarce resources and activities on the borderline to illegal behavior. It is important to understand and solve these problems not as specific forestry problems, but rather as part of the municipality's social and security policy.

Secondly, fringe groups are not clients for social welfare only. They are citizens who have the desire and the right to participate in the political decisions in the community. Due to their deficit in integration their ability to participate in policy-making is very low. Participation in the planning process is a chance which fringe groups are able to use very seldom. The lack of resources, organization and power prevent them from being a genuine partner in these procedures. As they are not much different from other interest groups, they would need some sources of political pressure for successfully promoting their interests. Therefore dealing with fringe groups includes the challenge to support them in finding their own way, building up political pressure and withstanding the guidance of public agencies. Helping urban minorities that meet in green areas is such a difficult task because it includes giving them a voice for fighting for their own interests, which might cause additional conflicts for public agencies.

5.6

**Future Perspective for Urban Forest Policy –
Task-Oriented Comprehensive Urban Forestry**

When combining the political deficiencies of urban forestry with the opportunities mentioned above, a strategy of a ‘task-oriented comprehensive urban forestry’ seems promising. In spite of stating a contradiction, this strategy might work better within the given dynamics of urban areas than the perfection of a comprehensive urban forestry concept or the concentration on a few issues only.

The concept of urban forestry definitely signifies the multiple benefits and the major need for maintenance of urban trees and forests. But the forces of urban policy do not guarantee sufficient support for the comprehensive concept which could optimize the use and protection of urban forestry. The basic concept of the sustainable city itself is unclear, the impact of planning on town development is very limited, political pressure concerning long-term ecological risks is weak, and public and private funds for green issues are diminishing. These political shortcomings signify that urban forestry is under strong pressure and will not have sufficient political support to implement a comprehensive concept, however desirable such a concept might be.

Nonetheless do the dynamics of urban areas offer three main basic trends in which urban forestry could play a major role. First of all, the development of cities is driven by huge market-oriented projects for new shopping, recreation, office or housing facilities with huge buildings and traffic lines. Such projects cause severe damage to the green area or agricultural belts around cities, but they need to integrate green elements in an innovative way defining the aesthetics of integration of trees and buildings anew. Significant financial sources and political support make it even more important to implement these projects. Secondly, strong symbolic communication, which is full of emotion-evoking symbols, is necessary to maintain the peace among the highly diverse and conflicting urban population. It offers urban forests the chance to frequently become part of this discourse in the media and in public. Any time this happens, a window of support for urban forestry opens. Thirdly, urban forests are important to fringe groups. Urban forestry could be recognised as an important partner for social policy and could even help in letting the voice of fringe groups be heard.

These three opportunities can be met by active and professional urban forestry institutions only. Participation in development projects needs high technical skills and efforts. Professional PR has to become part of the central discourse in town. To contribute to social policy requires new professional abilities of urban foresters. Resources and efforts of institutions have to be focused on these tasks in order to achieve the critical majority required.

At the same time there is the permanent need of comprehensive maintenance of urban woodland and trees. The idea is that success in the new main tasks will spill over and strengthen urban forest institutions in fulfilling their regular tasks as well. Experiences and manpower financed by participating in projects will be available; the good image in public discourse will help in the competition for funding. Social policy thus becomes a mighty new partner.

The spillover-effect will work best if there is a single institution responsible for urban forests. This institution can combine the success in specific tasks with the need to

maintain the urban forests in a comprehensive manner. If other institutions focus on one specific 'forest' task only they can easily be successful, but nothing will be left for many other needs of urban forests. The innovation and professionalism of existing institutions managing urban forestry, and the strength of the competing institutions trying to be successful in the few growing forestry tasks, will decide whether the concept of task-oriented comprehensive urban forestry will be implemented in practice.

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